United States Patent [19]

Musser et al.

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[54] CERTAIN UNSYMMETRICAL QUINOLINYL ETHERS HAVING ANTI-INFLAMMATORY AND ANTI-ALLERGIC ACTIVITY

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[*] Notice: The portion of the term of this patent subsequent to Jan. 28, 2003 has been disclaimed.

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[22] Filed: Dec. 19, 1985

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 666,430, Oct. 30, 1984, abandoned, which is a continuation-in-part of Ser. No. 530,811, Sep. 9, 1983, Pat. No. 4,567,184, which is a continuation-in-part of Ser. No. 445,876, Dec. 1, 1982, abandoned.

[51] Int. Cl.[4] C07D 215/22; C07D 217/24

[52] U.S. Cl. 546/152; 546/122; 546/149; 546/153; 546/176; 546/180; 546/339; 546/344; 544/250; 544/283; 544/345; 544/353; 544/385; 544/408; 549/365

[58] Field of Search 546/152, 149, 153, 180

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[57] **ABSTRACT**

Compounds of the formula:

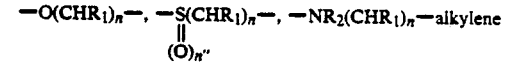
and salts thereof, wherein

Ar_1 is a nitrogen, sulfur or oxygen heterocyclic ring;

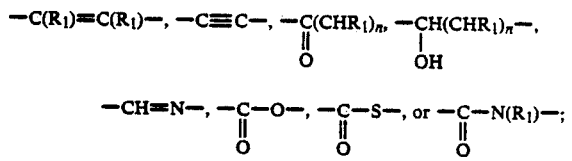
Ar is a phenyl ring or a nitrogen, oxygen or sulfur heterocyclic ring;

Ar and Ar_1 may be fully substituted or less than fully substituted with H, CH_3, lower alkyl, aryl, aralkyl, halo, hydroxy, lower alkoxy, CF_3, carboxy, alkylcarboxy, arylcarboxy, alkylcarbalkoxy, alkanoyl, formyl, oxo, nitrilo, amino, aminoalkyl, alkylamine, carboxamide, aryloxy, nitro, sulfonyl, sulfonamide, thio, alkylthio, hydroxyalkyl or oxyalkylcarbalkoxy;

X=



of up to 2 carbon atoms in the principal chain and up to a total of 4 carbon atoms,



Z is an alkylene chain containing up to 10 carbon atoms in the principal chain and a total of up to 12 carbon atoms and from 0 to 2 double bonds and the said alkylene chain may be attached to Ar through an oxygen, sulfur or amino nitrogen atom, and when n'=2, one of the R substituents may be halogen on an omega carbon of the alkylene chain Z;

when n'=1, R is a substituent attached to one of the carbon atoms of Z selected from the group consisting of =O, OR_3, SR_3, $N(R_2)_2$ and R_1, $-COR_4$ and when n'=2 one R is previously defined and the additional R is a substituent attached to one of the carbon atoms of Z selected from the group consisting of =O, OR_3, SR_3, $N(R_2)_2$, $-COR_4$, lactone and halo;

R_1 is H or CH_3;

R_2 is H, lower alkyl, aryl or aralkyl;

R_3 is H, lower alkyl, lower alkanoyl, aryl, aralkyl or substituted aryl in which the substituent is halo, lower alkyl or lower alkoxy;

R_4 is OR_2 or $N(R_2)_2$;

n=0 or 1;

n'=1 to 7; and

n''=0, 1 or 2.

36 Claims, No Drawings